

Accepted Manuscript

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PII: S0026-265X(18)30021-3
DOI: doi:[10.1016/j.microc.2018.04.017](https://doi.org/10.1016/j.microc.2018.04.017)
Reference: MICROC 3131
To appear in: *Microchemical Journal*
Received date: 4 January 2018
Revised date: 6 April 2018
Accepted date: 13 April 2018



Please cite this article as: Juan M. Padró, Sonia Keunchkarian , State-of-the-art and recent developments of immobilized polysaccharide-based chiral stationary phases for enantioseparations by high-performance liquid chromatography (2013–2017). The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. *Microc*(2017), doi:[10.1016/j.microc.2018.04.017](https://doi.org/10.1016/j.microc.2018.04.017)

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State-of-the-art and recent developments of immobilized polysaccharide-based chiral stationary phases for enantioseparations by high-performance liquid chromatography (2013-2017)

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Abstract

Polysaccharide-based chiral stationary phases have been recognized as one of the most powerful ones for high performance liquid chromatography (HPLC) separations of chiral compounds in analytical and also in preparative scale.

Immobilized polysaccharide-based chiral stationary phases constitute a remarkable achievement due to their stable nature on working with standard or common solvents and also with those prohibited for using with coated phases.

This review is mainly focused on the *i.* applications of these chiral stationary phases in numerous fields of HPLC separations; *ii.* comparative aspects between immobilized vs. coated polysaccharide-derived phases, and *iii.* revision of several theoretical studies such as enantiorecognition mechanism, mobile phase composition and column temperature effects.

Keywords: Chiral compounds; Chiral recognition mechanisms; Enantioseparations; High-performance liquid chromatography; Immobilized vs. Coated; Polysaccharide-based chiral stationary phases.

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